



Geostatistical Approach to Estimating the Gold Ore Characteristics and Gold Reserves: A Case Study Daksa Area, Quang Nam Province, Viet Nam

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Daksa gold deposit is the biggest gold deposits in Vietnam. The Daksa geological structure complicated, distributed mainly metamorphosed sedimentary NuiVu formation (PR3- ϵ_{1nv2}). The sulfide gold ore bodies distributed in quartz schist, quartz – biotite related to fault and distribution wing anticline. The gold ore bodies form circuits, network circuits, circuits lenses; fill the cup surface layer of the developing northeast – southwest; is the less than or west longitude north – SE.

The results show that, Au and accompanying elements (Ag, Pb and Zn) have correlated pretty closely. All of its consistent with the logarithmic distribution standard, in accordance with the law of distribution of content mineral rare. The structure functions have nugget effect and spherical models with show that Au and accompanying elements special variation are changes. Au contents shown local anisotropy, no clearly anisotropy ($K=1,17$) and weakly anisotropy ($K=1,4$). Intensity mineralization of the ore bodies are quite high with demand spherical conversion coefficient ranging from 0.49 to 0.75 and from 0.66 to 0.97 (for other body). With nugget effects, ore bodies shown that it is consistent with mineralization in the ore bodies study, ore erasable, micro vein, infilling fractures in quartz vein. All of variogram presents local anisotropy, indicated gold mineralization at study area has least two-mineralization stages, consistent with the analysis of mineralography samples. By the results of the structure function study, the authors present the system optimization for exploration deposit and used to evaluate gold reserves by Ordinary Kriging.

High accuracy of Kriging estimation results are expressed in the minimum Kriging variance, by compare the results calculated by some other methods (such as distance inverse weighting method, ..) and specially compare to the results of a some blocks have been exploited.

Key words: Geostat and gold deposits VN. Daksa and gold mineralization.
Geostat and gold mine Daksa.